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WHAT IS CLAIMED IS:

1. A method of sterilizing a device in a sterilizer, comprising:

placing said device into said sterilizer, wherein said sterilizer contains a sterilization load and said sterilization load comprises an enclosure, said enclosure comprises at least one aluminum surface and said at least one aluminum surface comprises a volume of aluminum oxide;

introducing an amount of hydrogen peroxide gas or vapor into said sterilizer, wherein the ratio of said amount of hydrogen peroxide gas or vapor introduced into said sterilizer to said volume of aluminum oxide is at least 24 mg/cm³; and

sterilizing said device in said sterilizer.

- 2. The method of Claim 1, wherein said aluminum is anodized aluminum.
- 3. The method of Claim 1, wherein said aluminum is raw aluminum.
- 4. The method of Claim 1, wherein said at least one aluminum surface is coated with a material.
 - 5. The method of Claim 4, wherein said material is a polymer.
- 6. The method of Claim 4, wherein said material is permeable to hydrogen peroxide gas or vapor.
- 7. The method of Claim 1, wherein said enclosure is a container comprising said device, and said container comprises at least one barrier, and said ratio of said amount of hydrogen peroxide gas or vapor introduced into said sterilizer to said volume of aluminum oxide is at least 47 mg/cm³;

wherein said at least one barrier is permeable to gas or vapor and impermeable to microorganisms.

- 8. The method of Claim 1, wherein said enclosure is a tray.
- 9. An enclosure for retaining a device capable of being sterilized in a sterilization process, said sterilization process comprising hydrogen peroxide, said enclosure comprising:
 - a plurality of walls and a bottom surface defining an interior space, said interior space capable of retaining said device;
 - at least one aluminum surface exposed to said interior, said at least one aluminum surface comprising a volume of aluminum oxide; and

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a material coated on said at least one aluminum surface, wherein said material is substantially impermeable to hydrogen peroxide gas or vapor.

- 10. The enclosure of claim 9, wherein said aluminum is anodized aluminum.
- 11. The enclosure of claim 9, wherein said aluminum is raw aluminum.
- 12. The enclosure of Claim 9, wherein said material is a polymer.
- 13. The enclosure of Claim 9, wherein said polymer is a polyaromatic polymer.
- 14. The enclosure of Claim 9, wherein said polymer is Parylene.
- 15. The enclosure of claim 9, wherein said enclosure is a tray.
- 16. The enclosure of claim 9, wherein said enclosure is a container.
- 17. A method of sterilizing a device in an enclosure, comprising:

placing said device in said enclosure, wherein said enclosure comprises at least one aluminum surface, wherein said at least one aluminum surface comprises a volume of aluminum oxide and a material coated on said aluminum oxide; said material being substantially impermeable to hydrogen peroxide gas or vapor;

placing said enclosure into said sterilizer;

introducing an amount of hydrogen peroxide gas or vapor into said sterilizer; and sterilizing said device in said sterilizer.

- 18. The method of Claim 17, wherein said aluminum is anodized aluminum.
- 19. The method of Claim 17, wherein said aluminum is raw aluminum.
- 20. The method of Claim 17, wherein said material is a polymer.
- 21. The method of Claim 20, wherein said polymer is a polyaromatic polymer.
- 22. The method of Claim 20, wherein said polymer is Parylene.
- 23. The enclosure of claim 17, wherein said enclosure is a tray.
- 24. The enclosure of claim 17, wherein said enclosure is a container.